How Organizational Transparency Strengthens Digital Innovation Capabilities in Startups

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HOW ORGANIZATIONAL TRANSPARENCY STRENGTHENS DIGITAL INNOVATION CAPABILITIES IN STARTUPS

Research Paper

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Abstract

Organizational transparency has been identified as an essential principle for organizations to adopt since it enables organizational agility and digital innovation capability, which have become crucial for companies to handle today's volatile digital market. Startups seem to embrace transparency, but there is little empirical evidence in the literature describing how startups use transparency to develop their organizational agility and increase their digital innovation capability. We conducted a qualitative study based on 23 semi-structured interviews on nine globally active automotive startups to understand how organizational transparency strengthens digital innovation capability. The result shows that in the cases where transparency enables trusting relationships and commitment between employees and across company borders, transparency can strengthen the startups' digital innovation capability and making more use of people's creativity. We conclude that startups that apply an external transparency strategy to open innovation can enhance their digital innovation pace and the likelihood of market success.

Keywords: Organizational Agility, Transparency, Digital Innovation Capability, Boundary Spanning

1. Introduction

Organizational transparency can contribute to building reliable relationships with external actors in order for companies to become an attractive partner for innovation collaborations and to improve the pace of innovation capability (Valkokari, Seppänen, Mäntylä and Jylhä-Ollila, 2017). A key success factor for succeeding with innovation in ecosystems is for companies to manage dynamic strategic interactions related to innovation (Valkokari et al., 2017). Organizational transparency has been identified as an essential principle for organizations adopting organizational agility, ensuring that potential desirable participants are not being kept out, and that generated value is shared among all actors involved in the different types of open innovation initiatives (Tapscott, 2015; Van Alstyne, Parker and Choudary, 2016; Burchardt and Maisch, 2019; Goncalves, Bergquist, Bunk and Alänge, 2020). Innovation in ecosystems is something that startups have embraced and turned into a competitive advantage (Tumbas, Berente, and Brocke, 2017). However, to make innovation happen in ecosystems, a new way of thinking by all involved actors is needed, as well as new organizational approaches and new managerial skills sets (Kapoor, Steiber, Choudary and Crainer, 2020).

Open innovation often revolves around collaboration—therefore, companies must consider how they are perceived by other actors in order to succeed in their innovation collaborations (Valkokari et al., 2017). In particular, one primary reason for failing with innovation in ecosystems seems to be that organizations fail to apply transparency in an adequate way, which in turn can stall collaborations in the ecosystem (Pera, Occhiocupo and Clarke, 2016; Van Alstyne et al., 2016). For organizations to apply transparency, there must be trust between the evolved actors, which means that organizations are willing to take a risk in a relationship (Schoorman, Mayer, and Davis, 2007). The strength of transparency is that it enables innovation in ecosystems, leading to access to external resources and knowledge that otherwise would not be available for the company (Chesbrough, 2020), enabling an increased innovation pace and growth (Van Alstyne et al., 2016). E.g., the ongoing joined global forces to rapidly find an adequate response to the ongoing pandemic (Chesbrough, 2020). Using digital platforms and cloud-based collaboration tools to share and openly collaborate on large accumulated data sets makes it possible for researchers to accelerate their work and faster find solutions. This also
opens up for work with global teams that can provide important contributions that otherwise would not be possible to involve. However, despite that companies have started to realize that they cannot keep up with the needed high digital innovation pace by themselves to stay competitive on the market, they are struggling in succeeding with their innovation collaborations with external actors. This innovation environment seems to require organizations to master how to design and orchestrate transparency for open innovation — including what transparency strategies to apply in order to attract the desired external resources and at the same time protect the company’s core assets (Van Alstyne et al., 2016).

Unlike other organizations, startups seem to embrace transparency and possess the necessary way of thinking to succeed in the innovation environment. However, we found few empirical studies that analyze how startups apply transparency to develop their organizational agility and increase their digital innovation capability. A central question is what prerequisites and demands are there to make organizational transparency work as an asset to strengthen startups’ digital innovation capability?

This study aims to explore how small startups in the automotive industry apply organizational transparency to strengthen their digital innovation capabilities. We therefore ask the following research questions: How does organizational transparency strengthen digital innovation capabilities in startups? and How can organizations mitigate potential risks following with organizational transparency?

The paper is organized in the following way: the literature review positions organizational transparency within the context of organizational agility and open innovation. After that, the method section presents the qualitative study and selection of companies, followed by results and analysis. The results are then discussed from how organizational transparency can strengthen startups' open innovation capabilities and mitigate the potential risks with organizational transparency. The paper ends with conclusions, limitations, and future research.

2. Literature Review

Transparency is an essential aspect of organizational agility and a fundamental enabler for open innovation to happen (Pera et al., 2016; Holbeche, 2018). Organizational agility builds the dynamics needed in an organization to be successful in digital innovation. This section presents literature that has contributed to contextualize the role of transparency for organizational agility: transparency in leadership; organizational members who operate in boundary spanning roles; the difference between internal and external transparency; the relationship between trust, commitment, engagement and transparency (Tapscott, 2015). Transparency can be defined as an organization's 'openness' relative to sharing information. According to Parris, Dapko, Arnold, and Arnold (2016), the term 'open' and 'openness' is not always explicitly used in the literature, but the meaning is generally implied. It has also been noted that social media can enable great openness (Tapscott and Williams, 2013), which can provide companies with resources for strategic and branding purposes and boost their innovation pace and give them competitive advantages. Another essential aspect of transparency is the ethical dimension of being open and transparent, which can be vital to credibility and trust (Tapscott, 2015; Parris et al., 2016). One aspect of this is that transparency makes it difficult to hide when information becomes available digitally and networked (Tapscott, 2015).

2.1. Organizational Agility

Agility and open innovation has become increasingly important for digital transformation (Burchardt and Maisch, 2019). Organizational agility is defined as an organizational ability to handle rapid and constant change to succeed in a volatile competitive global market (Dove, 2001; Teece, Peteraf, and Leih, 2016). The main driving force for agility is a response to change (Conboy, 2009). A healthy organization must be able to change (Schein, 2004), sense, seize, and transform to capture new business opportunities as they arise (Teece et al., 2016). The term "agility" has several different sources but is often mistaken for originating within software engineering. It was coined already in 1991 due to an extensive research project in cooperation with industry and government leaders, conducted at Iacocca Institute, Lehigh University (PA)— this research investigated how US industries could regain their international competitiveness and resulted in the Agile Enterprise concept, including core competence and management, virtual organization, capability for reconfiguration, and knowledge-driven enterprise (Goldman, Nagel, and Preiss, 1995). The Agile Enterprise concept
primarily targeted manufacturing companies. In software development, agility was established with the Agile Software Development Manifesto 2001, based on four values and twelve core principles, with i.a. emphasis on innovation collaborations with external actors (Beck, Beedle, van Bennekum, Cockburn, et al., 2001). The term 'organizational agility' includes, in its definition, the type of practices commonly referred to as Agile methods. While the Agile manifesto holds a bottom-up approach to develop better software, the Agile Enterprise advocates a holistic enterprise approach, regardless of software or hardware (Goldman et al., 1995; Yusuf, Sarhadi, and Gunasekaran, 1999). Organizational agility is crucial for organizations' innovation and competitive performance in contemporary business (Sambamurthy, Bharadwaj, and Grover, 2003; Tallon and Pinsonneault, 2011). The digital economy requires a collaboration culture of agility and transparency as essential enablers to co-create digital innovation (Tapscott, 2015; Pera et al., 2016; Burchardt and Maisch, 2019).

2.2. Transparency

The digital economy offers access to unprecedented amounts of information, enabling knowledgeable consumers to make more informed decisions, which can cause some challenges for organizations costumed to control what information to expose to external actors (Pralahad & Ramaswami, 2004; Tapscott, 2015). Furthermore, it is easy to set up thematic consumer communities in a connected world where people can share ideas and feelings of product experiences without regard for the location or social barriers—this leads to revolutionizing emerging markets and transforming established markets (Pralahad & Ramaswami, 2004; Tapscott, 2015). Community power comes from being independent of companies. Additionally, the connected world offers a global digital market where curious and knowledgeable people can experiment and develop digital products or services with fast, easy access to a global market (Andersson, 2011). As people learn and acquire new insights, it becomes easier to take a stand and make decisions that benefit them better, and when they share their insights with others, they can encourage each other to act and speak out (Pralahad & Ramaswami, 2004).

Openness with stakeholders enhances trust and confidence towards organizations and their way of operating within ethical, social, and environmental constraints (Parris et al., 2016). Organizations that can master transparency are likely to operate with candor, integrity, and engagement (Tapscott, 2015). In an agile enterprise, transparency is part of the culture (Holbeche, 2018). Leadership and culture are two sides of the same coin and a way for visionary leaders to provide psychological safety could be by providing a positive vision permitting the organization to move forward (Schein, 2004). According to Cannon and Edmondson (2005), leaders need to cultivate a work environment of psychological safety to enable people to feel safe to identify and reveal failures and learn from failures and share their learnings with the organization. Edmondson (1999) defines team psychological safety as a shared belief that it is safe for interpersonal risk-taking and that each individual's contribution to the work process is appreciated.

2.2.1. Transparency and boundary spanning

External knowledge is vital to organizations that compete on a global market (Goerzen, 2018), and opens up for new business opportunities and requires organizations to rethink their culture and structure for innovation. Research on boundary spanning has shown the need for organizations to rethink their knowledge management strategies and find a balance between dependency on co-located coworkers and the support for flexible integration through boundary spanning communication to improve individual and collective performance and creativity (Teigland and Wasko, 2003). Aldrich and Herker (1977) state that boundaries are defining characteristics of organizations, and boundary spanners are the link between the environment and the organization. According to Parris et al. (2016), boundary spanners play an essential role for an organization's transparency level. In the digital age where a large part of the population is connected, knowledge can easily be exchanged between individuals between competing organizations to solve problems or even to create knowledge (Teigland and Wasko, 2003; Tapscott and Williams, 2013). While boundary spanning can create value, there is also a risk that core company assets get in the wrong actors' hands. Therefore, organizations' leaders must serve as role models for transparency and clarify the organization's expectations relative to transparency (Parris et al., 2016). Previous research has provided evidence that there is a positive relationship between boundary spanning communication, creativity and general performance (Teigland and Wasko, 2003). Collaborative innovation is, according to Tapscott and Williams (2013), an
opportunity to optimize companies and organizations for a time of "network-based intelligence," which is based on a landscape where skills, knowledge, and ingenuity are more distributed than ever. Talents are more accessible than before since companies are not limited to local access. To succeed with open innovation requires that people operate in a boundary spanning role, connect knowledge from different sources, and process it to new combinations (Chesbrough, 2012). However, for people to perform within this kind of innovation environment, characterized by an increased focus on interdependency, personal responsibility, autonomy, and flexibility, a working environment of psychological safety is needed to ensure enhanced organizational performance (Baer and Frese, 2003; Schein, 2004). Another critical remark is that people do not give away knowledge and know-how for free. They trade knowledge and know-how with expectations of mutuality (Teigland and Wasko, 2003). When boundary spanning is utilized within organizations, they link their internal network to external information sources.

2.2.2. Transparency and trust

Transparency is related to trust, but it is not apparent how transparency contributes to trust in organization-stakeholder relationships (Schnackenberg and Tomlinson, 2014). It has been suggested in the literature that to increase trust, organizations must be more open and transparent in their communication (Rawlins, 2008; Chesbrough, 2020). When it comes to information systems, most research conducted on transparency is in the context of consumer relationships and digital markets. In contrast, organizational behavior researchers have explored transparency in the context of organizational trust development, organizational identity, perceptions of leadership, and organizational culture (Schnackenberg and Tomlinson, 2014). Trust is an antecedent and consequence of transparency (Parris et al., 2016). Transparency is crucial for creation of a sense of accountability and trustworthiness. If there is trust, people are more willing to be transparent and share knowledge, information, and know-how. Transparency and trust are vital for open innovation in ecosystems, requiring both a specific behavior of leaders and people in the organization and in their interaction with external actors (Chesbrough, 2012; Tapscott, 2015; Pera et al., 2016). According to Edmondson (1999), building trust is an essential ingredient in creating an environment where people feel safe to speak up without fear of negative reprisals, meaning psychological safety.

Nevertheless, building trust does not necessarily create an environment of mutual respect and caring. It merely provides a foundation for further development of a psychological safety environment (Edmondson, 1999). It has been proven that trust fosters collaborative culture, and also that collaborative culture influences trust (Kucharska, 2017). Companies that design their organizations, products, and services with transparency, data privacy, and ethics in mind can gain loyalty from employees and customers (Morey, Forbath, and School, 2016; Parris et al., 2016; Sarasvathy, Dew, Read, and Wiltbank, 2008). Trust is an essential facilitator; the more trusted a brand is, the more willing the customers are to share their data and collaborate (Morey et al., 2016; Kucharska, 2017). To achieve trustworthiness it is not enough to have a transparency perception; ethical behavior needs to be in place in order for the situation to endure (Parris et al., 2016).

2.2.3. Transparency and ethics

Organizations that exhibit ethical values, openness, and honesty have discovered that they could better compete, profit and survive (Tapscott, 2015). Trustworthiness is achieved when companies not only give the appearance of applying transparency but also behave accordingly (Parris et al., 2016). If organizations decide to apply transparency as a strategy, it is essential to keep in mind that the digital economy enables an ultra-transparent global market of instant communication, where every step and misstep is subject to scrutiny (Hatch and Schultz, 2010; Parris et al., 2016). Organizations that want to engage in responsible business practices can risk mitigate by incorporate transparency into their ethical code of conduct as a value proposition (Parris et al., 2016). Every organization with a brand and reputation to protect is vulnerable if not comply, regardless of whether it is towards stakeholders, customers, or employees (Tapscott, 2015; Pera et al., 2016). An indicator of building transparency through ethics is when the company's transparency perception and reality behavior are in accordance.
3. Analytical framework

As shown in the literature review, transparency is enabled by a combination of openness and the ability to cross boundaries between external and internal actors and resources. Transparency comes with a certain degree of risk that organizations should take into account and consider advantages against disadvantages as well as mitigate the risks of harm from transparency. When organizations are ethically managing transparency, they will enable creating trust, which enables collaboration to happen. To operationalize the identified dimensions in previous literature regarding how transparency affects digital innovation capability and how organizations apply transparency, we were inspired by two frameworks that deal with transparency from these perspectives: the Transparency framework developed by Parris et al. (2016) and the DART framework by Prahalad & Ramaswami (2004).

The Transparency framework deals with strategic organizational behavior and how organizations can gain organizational, employee, customer, and societal benefits when applying transparency. The Transparency framework can be applied to better understand when, where, and how organizations apply transparency to gain the wanted benefits. The Transparency framework can be used as a starting point for transparency strategy development for internal and external transparency, enabling trustworthy relationships to be established for innovation collaborations such as co-creation.

The DART framework consists of four dimensions; dialogue, access, risk assessment, and transparency. The DART framework examines transparency from a consumer relationship and a digital market relationship, while in our research, we take an organizational perspective.

Our focus is on how transparency impacts digital innovation capability which these two frameworks addresses and could support our analysis. Together, the frameworks highlight the interdependency between transparency and risk assessment to enable trustworthy relationships to co-develop in collaboration and engagement with external actors. Organizations that manage to develop transparency strategies to support innovation collaborations and environments, can gain further benefits, e.g., enhanced brand image and the competitive advantage of differentiation of product offerings, and more ethically sound and socially responsible business practices.

Therefore, we designed an analytical framework, Figure 1, inspired by these two frameworks in the following way. We combine the DART dimensions, dialogue, and access to better understand how startups engage external actors for digital innovation collaborations and develop different transparency strategies to manage and mitigate internal or external organizational transparency for a better fit for the different innovation collaboration environments. By control means that organizations control the innovation work and acquire more input for their innovation. Agile means that organizations, to a greater extent, co-innovate with external actors. Those who apply an internal transparency strategy have more focus on internal innovation, and those who apply an external transparency strategy have more focus on co-innovation.

4. Research Methods

This study is part of a larger research project on how organizational agility enables digital innovation in automotive startups. The automotive industry is undergoing a significant transformation from previously a mechanical industry to becoming a computerized electromechanical industry (Eliason, Heldal, Lantz, and Berger, 2014). The industry needs to switch from hardware to software solutions (Burchardt and Maisch, 2019), rethink how they view the product car and start viewing it as a platform for service delivery in an ecosystem such as sharing economy transport models Zipcar, Uber, and Lift (Swan, 2015). The interest in investigating digital innovation capability in automotive startups is based on the observation that certain startups have challenged incumbents in the automotive industry, despite their limited resources.
4.1. Research Approach

To gain a deeper understanding of how startups apply transparency to strengthen their organizational agility in the context of digital innovation, we conducted a qualitative multi-case study, where a company corresponds to a case (Eisenhardt, 2021). The multi-case method makes it possible to compare the case startups more systematically to identify patterns and make learnings transferable to other types of contexts for transparency and organizational agility. This approach is recommended when there is relatively little prior knowledge, and the goal is to better understand a phenomenon (Eisenhardt, 2021). Focusing on a single company would probably give more in-depth insights, but the results would be limited to the object studied, and provide limited ground for generalization and transferability. An inductive approach was chosen to mitigate for preconceived ideas and pre-identified concepts to affect the analysis and results of the study (Corbin and Strauss, 2015). The inductive method facilitates identifying patterns derived from data under analysis that can contribute to new insights and knowledge to understand today's challenges in a digital market. Furthermore, the qualitative method allowed us to further understand how people's thinking and behavior enable increased digital innovation capability by applying transparency (Bryman, 2012). To get a better idea of how the daily innovation work was carried out at the different companies, we conducted most of the semi-structured interviews locally by going to Gemba, which means visiting practitioners and conducting the study where the actual work takes place (Tyagi et al., 2015). When interviewing people at the site, it usually makes it possible to develop a trustworthy relationship, leading to the interviewee feeling safe and becoming more open and honest when answering our questions (Edmondson, 1999). When conducting interviews over Skype or Zoom, it takes a longer time to establish that kind of trust and shorten the agreed upon interview time. The interviewee might feel insecure if someone else is listening to the ongoing dialogue, which can cause them to hold back on honestly answering our questions. It was the primary reason to keep this kind of method for interviewing to a minimum, in total it was four interviews out of 23 interviews that were conducted through digital media.

4.2. Data Collection

To identify potential startups in the mobile industry for the study, we screened the automotive startup landscape in Europe. The sample selection criteria for this study were startups within the domain automotive, the company is no more than ten years old, and the founder is still in the company. The startups should have a headcount of at least four employees, and the company should be a product development company, and digitalization is part of the company strategy. We chose nine international active startups, all from Sweden except one from the USA active in Sweden. They were chosen due to their active approach to digital service innovation since this is generally driving innovation in this domain today (Lyytinen, Yoo, and Boland, 2016). The selection of the startups was based on their ambition to master the new digital service markets. Four startups out of nine were or had been located in an incubator to speed up their co-creation capability, a win-win for both startups and incumbents (Weiblen and Chesbrough, 2015). The incubator offers pioneering ideas and the opportunity to accelerate through strategic partnerships with six global players within mobility and connectivity.

We designed a semi-structured interview guide with a set of 37 predefined open-ended questions and additional 11 questions to cover for demographics. We interviewed individuals with management and strategic positions (Table 1), to understand how the company’s board and top management enable and apply co-creation to promote digital innovation growth. Nevertheless, other organizational actors were also interviewed to provide a broader picture and to verify whether the management's statement could be correct (Eisenhardt and Graebner, 2007). We totally conducted 23 interviews.

The startup sizes followed the European Commission definition of SMEs being enterprises that meet the staff headcount: Small (S) with less than 50 employees; and Medium (M) with less than 250 employees. We conducted interviews with five of the startups at their company site, and the remaining four via interactive on-line dialogue. The interviews took approximately 1.5 - 2.0 hours, and all interviews were recorded and afterward transcribed. When necessary, supplementary questions were asked to the interviewees to fill gaps in understanding the data we had collected. Additional secondary data collection included white papers, web pages, social media, and a literature survey (Eisenhardt and Graebner, 2007). White papers, websites, and social media were mainly used to link the interviews to current market events and publicly available discourses in the open innovation domain to strengthen
our study argumentation and verify the interviewers' statements about how they used social media. We could verify this by seeing if the companies were active on the channels they had stated to us. For one of the startups, we participated at their prototype launch event that they held for special invited external actors where they, together with some of their key partners, shared their progress and how the innovation collaboration progressed. We participated at the event together with over 1000 other participants, including their current investors. Networking at this event gave us some insights into how the startup collaborated with their key partners and how this kind of event attracted additional new investors, partners and potential future customers.

4.3. Data Analysis

We applied a systematic combining approach, which involves the process of going back and forth between data, extant literature, analytical framework, and analysis evolving simultaneously—a process where the theory can be used to support our analysis of our empirical data followed by finding and revising the different patterns we found in our empirical data (Dubois and Gadde, 2002). This approach affects and is affected by four factors: what is going on in the studied empirical situation, available theories, the case that gradually evolves, and the analytical framework. To reinforce our results and reasoning, we have selected quotes from our interviews to demonstrate how these companies applied transparency to strengthen their digital innovation capability. In our analysis, we identified two types of transparency: internal transparency and external transparency. We identified the following dimensions for these two types of transparency: trust, boundary spanning, and ethics. We plotted the different startups into our analytical framework to visualize the results in relation to the identified transparency patterns, Figure 2, to further convey the results and reasoning in the discussion section, leading us to conclusions.

5. Results

We have chosen to present the results in relation to how startups applied transparency as a strategy based on two different organizational transparency types; internal or external transparency enabling their digital innovation capability, both if applying primarily internal innovation or open innovation.
We plotted the startups into our analytical framework based on their corresponding applied transparency strategy and digital innovation capability, Figure 2. We found that some startups were only transparent within their organization, and how and to what extent they applied transparency towards external stakeholders differed between them. We identified how external transparency impacted each of the companies’ innovation capabilities depending on the applied innovation path. When we apply our analytical framework, we found that startups applied different organizational transparency patterns—figure 2.

<table>
<thead>
<tr>
<th>Semi-Protective Transparency</th>
<th>Community Transparency</th>
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<tbody>
<tr>
<td>Dialogue with stakeholders is handled through semi-formal channels and access to information gathering for primarily internal innovation.</td>
<td>Dialogue with stakeholders is handled through semi-formal channels and access to information gathering for both innovation environments, information, and tools that can be openly shared between the various stakeholders.</td>
</tr>
<tr>
<td>Transparency is applied for internal alignment and commitment and limited open stakeholder engagement, mainly with customers.</td>
<td>Transparency applied for internal alignment and commitment and increased stakeholder engagement, primarily with customers and investors.</td>
</tr>
<tr>
<td>Internal transparency strategy mitigates that organizational core assets and information from being exposed to external stakeholders by mistake and that the organization does not deviate from the desired ethical behavior.</td>
<td>External transparency strategy mitigates that organizational core assets are not lost and that the organization does not deviate from the desired ethical behavior.</td>
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<tr>
<td>Startup: A, B</td>
<td>Startup: C, E, I</td>
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<tr>
<th>Protective Transparency</th>
<th>Platform Transparency</th>
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<tbody>
<tr>
<td>Dialogue with stakeholders is primarily handled through formal channels and for collection and access to information for internal innovation.</td>
<td>Dialogue with stakeholders is primarily handled through open channels and access to information gathering for digital service innovation on top of an external platform.</td>
</tr>
<tr>
<td>Transparency is applied for internal alignment and commitment and more formal stakeholder engagement, primarily with consumers.</td>
<td>Transparency applied for internal alignment and commitment and increased stakeholder engagement, primarily with consumers.</td>
</tr>
<tr>
<td>Internal transparency strategy mitigates that organizational core assets and information are exposed to external stakeholders by mistake.</td>
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<tr>
<td>Startup: G, H</td>
<td>Startup: D, F</td>
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Figure 2. Results plotted into our analytical framework. Left side: internal focus. Right side: external and internal focus. Upper half: agile focus. Lower half: control focus.

5.1. Protective Transparency—Startup G, H

These startups had the focus of primarily internal transparency and limited external transparency. Transparency enabled the startups to build loyalty and trustworthy relationships, leading to efficient use of their internal resources. As the startup H CEO stated, "What I love is that the trust results in loyalty." However, these startups had limited innovation capability compared with the other startups. One of the startup's challenges was that they could not always attract, pay, and retain the right talents for their innovation work. The CEO at startup H offered transparency as a value proposition, "We cannot offer a high salary, but we offer high transparency in return." They were doubtful if external transparency as a strategy would be applicable for stakeholders from other countries. The Startup H CEO stated, "In Sweden, we have a certain level of trust that we are comfortable with, and our colleagues can be in a transparent environment. When it comes to working in Asia or eastern Europe, we are not sure." Startup H struggled to attract investors and external actors for co-creation, without success. According to the CEO of startup H, they even paid for expertise to support them in applying for funds, with meagre results. Their innovation turned to a traditional high-tech industry domain which is more challenging to attract business-to-business customers through social media. The Startup H innovation area included both hardware and software, which may have had a dampening effect on their innovation pace. Given that their customers are in a more traditional industry domain, they left them in a stagnant flow of innovation because their customers did not have the needed co-innovation capability. Startup G stated a slightly different problem since most of their work was consulting due to the lack of innovation funds. Their core was to sell innovation capacity to other companies.
5.2. Semi-Protective Transparency—Startup A, B

These startups had the focus of internal transparency and limited external transparency and invested in building trust through transparency by giving all staff access to all company information, except salaries and certain legal company information. The CEO at startup A stated, "Most people assume responsibility when they get it. It is very seldom people misuse information." These startups were not very active on social media; they were more introverted and worked with internal innovation. These two startups have been out on the market for far more years than any of the other studied startups, and with a lower innovation pace compared with those who stood out. The main reason was that they were not able to attract external actors and investors for innovation collaborations, could be related to not have adequately applied an external transparency strategy. According to Startup A, "Collaboration goes well once you are inside a collaboration. The tricky thing is the first contact with the customer." Startup B had decided that they did not want to have any external capital involved; they wanted to be completely independent. The CEO regretted the decision to be independent by avoiding external funding. Instead they had to initially take on different jobs to survive financially. Startup A had a slightly different situation since the companies CEO had a track record of building companies that attracted investors. These startups developed both hardware and software innovation, further explaining the slower pace of innovation, including not having similar boundary spanners within their organizations. According to the CEO at startup A their people were more introverted. It could be a reason for having a lower level of organizational agility.

Nevertheless, the startup leaders tried to cultivate an atmosphere of a safe working environment to mitigate the risk of employees becoming uncomfortable when they were outside their comfort zone, negatively impacting the companies innovation performance. The CEO at startup B mentioned that he tried to get the message out "Respect for the person, not the ideas." For them, it was imperative not to miss an idea just because one person did not dare to speak up, or question an idea they did not believe in due to fear of conflict. According to the startups; A, B, G, H, located in an incubator, the collaboration with incumbents never happened, but the gain was that they could build their network.

5.3. Platform Transparency—Startup D, F

These startups had the focus on both internal and external transparency. They stated that when they communicated openly, they received very positive comments from their customers and that, in the long run, transparency built their brand. External transparency typically manifested itself in active dialogue with customers via social media such as YouTube, LinkedIn, Facebook and Twitter. Transparent social media customer relationship enabled more convenient access to requirements, and a better understanding of how real customer problems could turn into innovation opportunities. Startup F stated that transparency was a success factor because it urged them not to hide uncomfortable facts, it would remind them regularly to keep in mind the risk of these facts coming out. Regarding the effects of their external transparency through social media, they stated "You get a more positive response in the long run, and it builds the brand. It attracts the people that we want to have." Startup D stated, "Loyal customers do not do business outside the company." However, these companies view aspects of transparency as dependent on cultural differences; they did not trust partners or customers from some countries. Startup D stated, "In Sweden, everything is already very much public; it is easy to be transparent, while there is no transparency culture in the Netherlands or Germany."

However, these startups had limited digital innovation capability due to their investors not giving them the needed financial space. These investors required a short-term return on investment, which left the startups with exploitation as an innovation option, meaning add services on external platforms. Startups relied on their customer networks on social media platforms to improve new ideas and proposals for digital service innovations implemented on an external e-commerce platform. Startup F stated, "We try to use our network in the digital social community to get help with contacts and ideas." Startup D explained that they worked according to a model based on improving existing products internally and buy the innovations that would enable them to gain market shares.

Transparency towards external actors served as risk mitigation from deviating from desired ethical behavior. These startups applied an ethical foundation as a company differentiator towards recruits and customers. Startup F stated, "We have a collective agreement in place for our employees, and a
significant part of our drivers are permanent employees, which is a differentiation compared with other companies in a similar industry." It was an aspect of social ethics that they felt showed that they were a serious company. With a clear perception of transparency and genuine ethical behavior, these startups stated that they had achieved better open innovation results in quality and innovation. Some statements from startup F: "Customers encourage us to be fairer and more honest. It is a bit refreshing." Startup D stated, "Brutal honesty is one of the values of the company."

5.4. Community Transparency—Startup C, E, I

These startups were the most disruptive companies with a digital innovation capability that stood out compared with the other startups in this study. They applied both an internal and external transparency, focusing on external transparency by applying a community transparency strategy to enable open innovation. These startups used transparency and trust to capture ideas from as many employees and stakeholders as possible, not to miss any opportunity for innovation. Empowered people made co-creation happen and had no fear of being transparent if something went wrong. Trust and transparency were mutually promoting, and this secured that ideas (potential opportunities for innovation) were not being lost to collaborating partners. At startup C, even the individual salaries were transparent for everyone. To keep an inclusive culture within the organization, the startup CEOs would hold open meetings to cultivate an environment where people feel safe to speak up in their organization, which creates a safe working environment. It was vital for the founders that people felt safe in their organization and never doubted if they could speak out. It was a way to mitigate that a culture of silence would not take root in the organization. When each individual was updated with what was happening within the company and ongoing projects, it was easier for individuals to see where they could contribute. Startup E was the most extreme of the startups by posting YouTube videos to share their innovation progress and their learnings so far, both favorable and unfavorable. By sharing their failures and the learnings they add value to others, and at the same time, they build a solid ethical brand by showing its vulnerability. Startup E serves as a role model for how organizations can apply the Lean method 'Gemba' out on social media. Leading to create a 'hyper' brand, attracting the resources they want to hire, the partners they want to innovate with, the investors they want to work with, not just for their money but also for their network, knowledge, experience, and doors they could open for the startup.

Transparency did not mean that people should share everything with everyone when collaborating across company borders. The CEO in startup I stated, "It is vital to make sure that employees do not end up sharing too much of the company's core technology or core strategy." These startups work in ecosystems to ensure the collection of requirements from a broad population so they do not end up having built their solution into a corner. Startups that apply external transparency tended to get the needed trustworthy relationship in place, enabling them to master the innovation ecosystem to ensure that their product would continuously serve several external actors’ needs. The applied open innovation approach enabled more significant value creation and increased innovation pace because requirements and integration points were dealt with upfront with their partners in the ecosystem. These startups stated that they were aware that more niche small businesses would engage in the innovation ecosystem. Startup E stated, "The future is driving towards collaborations to get hold of experience and know-how." Both startup E and I mentioned that it was evident that it would revolve around collaboration due to innovations involving autonomous cars would become broader, with new and completely different verticals compared with the traditional landscape. According to startup E, "Ideas for a solution can come from anywhere," meaning that all ideas could count for innovation, and the ideas that turn out to be business-functioning will survive. Startup C had a strategy to innovate in an ecosystem and applied a circular business model involving potential customers, which enabled a broad collection of requirements from their partners and potential customers, which mitigated the design to not end up in a corner (static product) preventing the product from scaling. Startup C even had one of their customers coding in their part of the product and vice versa (a capacity measuring software integrated in a customer physical product). Startup E managed to attract incumbents to knock on their door, proposing win-win innovation collaborations. Startup E stated, "We are more open and more towards co-creation, fast feedback from users to help us shape our product." According to one of the startup C founders, employee empowerment was beneficial for their innovation space and better utilization of the company's collective knowledge assets and relationship building with external actors,

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e.g., by comfortably stand-in for any of the founders when needed. This could be seen as an internal boundary spanning capability, but it was also a way to foster the innovation culture the company tried to craft. Startup E utilized their resources where they would add the most value for the time being. People were prepared for taking one role one day, and another role the next day depending on the startups' priorities. The interviewed chief-levels at the startups, particularly C and E, were very careful to state that while titles were a necessity for external communication, internally titles had no value. An interviewee had the title chief operations officer, though it could change whenever required. The startup I applied 'job rotation' to foster boundary spanners that could utilize their resources optimally.

Startups C,E, I were careful to be completely transparent about what was favorable and less favorable by working at the company as a way to attract and retain the talent needed. It meant that people knew what to expect from the start, enabling them to be entirely focused and committed to the innovation work. Ethical behavior related to transparency was a cornerstone for how they chose to lead the innovation work at their organizations by continuously monitoring their perceived ethical behavior related to genuine transparency to secure that they would not deviate from the desired ethical behavior.

6. Discussion

Today's open innovation environment demands organizations to transform their thinking for how to design and orchestrate transparency for open innovation, requiring excellent collaboration skills making co-creation to happen while at the same time protect the companies core assets (Van Alstyne et al., 2016; Kucharska, 2017). As our results have shown a company transparency strategy can facilitate guidance by visualizing what parts of the innovation initiative should be organized as open innovation or internal, leading to increased innovation and value creation. Despite the value of applying transparency strategy, current literature has primarily focused on incumbents.

We found four different transparency patterns where three out of four transparency patterns seemed to have to varying degrees enabled open innovation collaborations for startups positively. In particular, startups applying the community transparency strategy seemed to have the necessary thinking to succeed in the open innovation environment and strengthen their organizational agility, while the protected transparency strategy had an inhibitory effect. Organizational agility requires both internal and external transparency to enable rapid redistribution of resources where they best contribute to the ongoing innovation work, a capability the startups applying community transparency possessed. To get all evolved actors on board, everyone must understand what is happening in the environment to make the right decision. Even though most startups were aware of the value of co-creating with external actors, few startups fully mastered how to apply transparency, enabling craft organizational agility to increase their digital innovation capability. Open innovation requires extensive engagement from the parties involved (Prahalad and Ramaswamy, 2004). In our study, only three of the nine startups successfully achieved this kind of co-creation. It could indicate that having a wish and willingness to collaborate is not enough to make co-creation happen. None of the startups located in an incubator succeeded in co-creating with incumbents, it is a question of whether the heavy process-controlled industry has lost its ability to build trustworthy relationships for open co-creation.

The startups that applied community transparency as a strategy emphasized co-creation to strengthen their digital innovation capability. To succeed in getting co-creation to happen, they worked hard to establish a trustworthy relationship with their external actors they wanted to co-create within ecosystems. True collaboration was something most of the startups tried to establish with external actors, i.e., win-wins. It was a way to share risk and fast respond to market changes proactively, and redirect the innovation initiative to a new reality when needed (Wallace and Mello, 2015). For collaboration to take place, there must be mutual trust and respect for the individuals involved, and that stakeholders will not benefit from each other but believe that when they share knowledge and know-how, it will lead to better solutions (Morey et al., 2016; Parris et al., 2016; Kucharska, 2017).

As identified by Parris et al. (2016), a transparency strategy can facilitate reliable relationships with external actors to develop more quickly. Nevertheless, for external actors to engage in open innovation collaborations, this study shows that the transparency strategy must also include a significant willingness to experiment with different paths, fail fast, learn and adjust. It is important to admit when being wrong and share one's thoughts, findings, and learnings. The startups with external transparency
focus constantly experimented with finding appropriate transparency strategies to improve their collaboration skills with external actors, enabling them to access external knowledge on their terms and excel despite limited resources. Startups need to manage their time and finances for short-term survival; this in itself creates a form of a crisis that makes them more rapidly and willing to respond to change (Schein, 2004). Some of the startups mentioned that they had deliberately opted out of collaborating with incumbents initially because it would have slowed down their innovation pace when they had to prove themselves towards their investors.

Transparency enables a safe environment to be built for people to dare to stand out from the crowd and collaborate both internally and across company borders efficiently (Tapscott, 2015; Cannon and Edmondson, 2005), something that all startups emphasized to establish. Some startup founders were aware that even when trust might be in place, it did not necessarily create the desired safe environment of mutual respect and caring, as one CEO stated that he often reminded people to respect the person and not the ideas. Even when organizations hire recruits with innovation and entrepreneurial spirit, passionate about their field and grit capability, if they do not feel safe or thrive in the environment, they will most likely not excel (Steiber and Alänge, 2013). When people feel safe in the working environment, and leaders and colleagues are transparent with significant or less favorable events, it enables the development of a learning organization. Besides, startups were aware that providing a safe environment could mitigate the risk of not discovering mistakes that could have been prevented in the ongoing innovation collaboration or risk missing new market opportunities (Schein, 2004).

We found that startups that emphasized an ethical and challenging social vision created a brand that attracted potential recruits and external actors and customers, facilitating the company to take a driver's seat for their innovation enabling them to stay competitive and profit despite their limited resources (Hatch and Schultz, 2010; Steiber and Alänge, 2013; Parris et al., 2016). These startups tended to gain an advantage to attract the wanted investors not just for their monetary contribution but also for their knowledge, experience, know-how, and doors they could open to develop and scale the company (Luoma-Aho and Halonen, 2010; Steiber and Alänge, 2013; Goerzen, 2018). Ethics will play an increased role when moving on towards a more connected society having in mind all data collected in vehicles, and this is something that some OEMs are already beginning to take into account by creating and implementing new roles, e.g., chief compliance and ethics officer as the Wall Street Journal recently noticed (Hagel, 2021). If organizations want to engage in responsible business practices, it is not enough to implement new roles; it will require that their organization's transparency perception and reality behavior comply. The digital economy enables increased transparent direct communication, which is subject to review when deviating from the organization's communicated transparency strategy. It may explain why startup founders were very careful to point out that they did not want to give the appearance of something they could not stand for or deliver uniformly. For a startup, it would be devastating given their vulnerability.

7. Conclusion & Contribution

This paper aimed to clarify how and under which conditions organizational transparency strengthens digital innovation capabilities in startups and how organizations can mitigate risks with organizational transparency. First and foremost, we found four different transparency strategies that seemed to impact the startups' digital innovation capability differently. These strategies differentiated two different transparency focus, internal or external, which seemed to impact the company's digital innovation capability differently. External transparency showed a positive effect when companies applied open innovation strategies because it contributes to trustworthy relationships with external actors, enabling collaboration across company borders. Startups that applied internal transparency facilitated internal alignment, engagement, commitment and enabled intra-organizational boundary spanning. Second, the startups applying a community transparency strategy stood out compared with the other startups. These startups seemed to have thought through what parts of their innovation should be core innovation and remain internally and what parts could be co-innovated or ‘killed’. They succeeded in executing strategies that supported them decide what kind of external actors they wanted to collaborate with and when in time through the innovation life cycle to involve them in maximizing their innovation pace, minimizing the risks, and increasing market success. Third, some startups mitigated potential risks following transparency by incorporating transparency into their corporate
core values of ethics, which defined their culture. Ethical behavior related to transparency also positively impacted its brand, leading to building a trustworthy relationship, especially with its investors and customers. It enabled startups to attract the investors they wanted to involve. Not only for their monetary contribution but also for their experience and ability to open doors.

Our contribution to the organizational agility theory is our empirical finding that startups that apply an organizational community transparency strategy seem to strengthen their digital innovation capability more forcefully. They proved to gain the opportunity to choose and actively chose whom they wanted to work with and reject those not promoting and keeping up to their innovation pace. The results showed considerable differences between different startups' digital innovation capabilities based on their applied transparency strategies. Furthermore, it requires that a reliable relationship is established with the involved co-creators and that co-creators are open, mature, and have certain courage to enter into co-creation. The contribution to practice is that our transparency framework can be applied to guide companies to better understand their current digital innovation capability depending on the applied transparency strategy and what may need to be addressed to create another desired digital innovation capability.

8. Limitations and future research

This study has some limitations due to data collection coming mainly from globally active Swedish automotive startups, except for one USA startup (active in Sweden) and one startup with its mother company in the Netherlands. Thus, it would be interesting to study startups from other countries, especially since some of the startups in this study pointed out that not all countries have a culture of openness, which had lead to an inhibitory effect on their open innovation collaboration in these countries. Furthermore, it would be interesting to continue to examine startups applying community transparency strategy, given their digital innovation capability pace, and analyze probable transferability patterns to incumbents. Given the sample size, the generalization of the results must be made with caution.

References


